## REMARKS

This amendment is responsive to the Final Office Action dated August 9, 2007. Applicant has amended claim 12. Claims 1-16 are pending.

### Claim Rejection Under 35 U.S.C. § 101

The Examiner has rejected claims 12-16 as being directed towards nonstatutory subject matter. Applicants respectfully request reconsideration.

Applicants have amended claim 12 to recite a "computer-implemented" method. It is submitted that one skilled in the art appreciates that the transformations which result from the computer-implemented method as claimed are "useful, concrete and tangible". The computer-implemented method as claimed accomplish a practical application.

Applicants respectfully submit that the transformation of a body of data into dimension-based partitioned cubes is a useful, real-world, result of claim 12 (and thus claims 13 to 16 as well). Applicants note that the specification provides detailed examples of such a method where the dimension is time.

The transformation includes the steps of partitioning the data which results in the useful, real-world, result of data being partitioned into one or more dimension based partitions. Also, the steps of creating member cubes and creating a control cube result in the useful, real-world result of the member cubes that correspond to the one or more dimension-based partitions and a control cube for representing the data distributed over the member cubes.

Applicants trust that the Examiner now agrees that claims 12-16 now comply with 35 U.S.C. 101.

### Claim Rejection Under 35 U.S.C. § 102

The Examiner has rejected claims 1-6, 9, and 11-13 as being anticipated by Yeh. Applicants respectfully request reconsideration of these rejections.

Applicants note that the summary/detail architecture of Yeh provides cubes that share all dimensions, including dimensions that are not partitioned (Fig. 4, object 36; Fig. 5; column 6, lines 55-60, etc.). One consequence of having identity of dimensions is the possibility of cloning detail cubes (column 2, lines 40-43). By contrast, the present invention, the dimensions in

member cubes can differ in number. Moreover, the number, levels and hierarchy of categories of member cubes can differ. Thus, the dimension-based partitioned cube of the present invention is more flexible than the summary/detail architecture of Yeh.

Applicants also note that for navigation, the summary/detail architecture of Yeh requires a zoom in/zoom out feature (column 8, rows 19-54). This is facilitated by the fact that both detail and summary cubes have identical dimensionality (columns 5, 22-23, 29-32) so that selections and filters can be preserved. By contrast, the dimension-based partitioned cubes of the present invention does not require a special zooming facility in members cubes. It is the control cube that analyzes the selections and filters associated with user query. According to the inferred domain of the query in the partitioning dimension (i.e., the subset of members in the partitioning dimension that are targeted by filters and selections of the query), the control cube decomposes the query into subqueries and dispatches them to members cubes. Upon obtaining the partial subqueries results, the control cube aggregates them and then returns the final result to the user.

Applicants further note that regarding multi-partitioning, the approach in Yeh does not teach a summary cube design (column 7, lines 12-19). One skilled in the art would appreciate that the detail cubes in Yeh would form a multi-dimensional grid which would be a possibly cumbersome and unbalanced set of detail cubes. By contrast, the present invention teaches allows any member cube to be replaced by a control cube and its own member cubes, where this lower-level control cube can employ partitioning in the same or any other dimension as in the parent control cube.

Furthermore, Applicants note that in the approach taught in Yeh, both summary and detail cubes contain data, pre-aggregated as appropriate during cube processing (column 6, line 19-25). By contrast, in the present invention, the control cube does not contain any data, and no aggregation takes place at the time of cub processing.

**As to claim 1**, Applicants submit that the summary cubes of Yeh are not identical to the control cubes of the present invention. The summary cubes of Yeh appear to contain the upper level members while the control cubes as claimed in the present invention are for accessing the member cubes.

The Examiner has stated that "Yeh clearly teaches using summary cube (control cube) to navigate information in detailed cubes (partitioned member cubes), see Fig. 4." Applicants note

that Fig. 4 shows the overall architecture of the summary/detail architecture as taught in Yeh. However, Fig. 4 does not indicate how this summary cube facilitates the navigation. Navigation is later described (but a mechanism is not disclosed) in the zoom-in/zoom-out discussion at column 8, lines 19-54. Thus, the summary cube (which contrary to the Examiner's belief is not similar to the control cube of the present invention) does not navigate information in detailed cubes.

**As to claim 2**, Applicants submit that Yeh teaches at column 6, lines 48-51 that detail cubes have the same dimensionality as summary cube except their target dimensions are partitioned. This does not teach a control cube having an entire partitioned dimension relative to the member cubes.

The Examiner has stated that "As admitted by Applicants, Yeh clearly teaches summary cube (control cube) has an entire partitioned dimension and the detail cubes contain the partitioned target dimensions." Applicants note that what Yeh actually teaches is that the summary cube contains only upper level members of partitioned dimension (column 6, lines 9-11) and not an entire partitioning dimension.

**As to claim 3, 4, 5, 6 and 9**, Applicants submit that Yeh does not disclose the elements of this claim for the same general reasons set out above, and since claims 3 to 6 and 9 are dependent upon claims 1 and/or 2.

**As to claim 11**, Applicants submit that column 7, lines 12-23 of Yeh do not teach a member cube being the control cube.

**As to claim 12**, Applicants submit that the summary cubes of Yeh do not represent data distributed over the detailed cubes. Rather, the summary cubes of Yeh appear to contain the upper level members while the control cubes as claimed in the present invention are for representing the data distributed over the member cubes.

**As to claim 13**, Applicants submit that Yeh does not disclose the method steps of this claim for the same general reasons set out above, and since claim 13 is dependent upon claim 12.

Applicant trusts that the Examiner now agrees that claims 1-6, 9, and 11-13 are patentable over Yeh.

**Claim Rejection Under 35 U.S.C. § 103**

The Examiner has rejected claims 7, and 14-16 as being unpatentable over Yeh as applied to claim 13 and further in view of the Joy Mundy reference. Applicants respectfully request reconsideration of these rejections.

**As to claims 7 and 14-16**: As set out above, Applicants submit that Figures 1 and 5 of Yeh disclose that groupings of data can have a time dimension, but do not show data partitioned along a time dimension.

Moreover, Applicants note that the assignee of the Yeh reference is the same entity that purports to own the Joy Mundy reference which was published prior to the Yeh reference. As such, Applicants submit that if it were obvious to a skilled person to combine these two references together, Yeh would have included any Joy Mundy functionality in its disclosure.

In any event, Applicants note that claim 7 is dependent upon claims 1, 4, 5 and 6 and claims 14-16 are dependent upon claims 12 and 13. The Mundy reference fails to overcome the limitations of Yeh as generally set out above.

Applicant trusts that the Examiner now agrees that claims 7 and 14-16 are patentable over Yeh as applied to claim 13 and further in view of the Joy Mundy reference.

The Examiner has rejected claims 8 and 10 as being unpatentable over Yeh as applied to claims 5 and 9, and further in view of the Pasumansky et al. Applicants respectfully request reconsideration of these rejections.

**As to claims 8 and 10**: As set out above, Applicants submit that:

- The summary cubes of Yeh are not identical to the control cubes of the present invention. The summary cubes of Yeh appear to contain the upper level members while the control cubes as claimed in the present invention are for accessing the member cubes.
- Yeh teaches at column 6, lines 48-51 that detail cubes have the same dimensionality as summary cube except their target dimensions are partitioned. This does not teach a control cube having an entire partitioned dimension relative to the member cubes.
- Figure 5 of Yeh discloses a listing of shared dimensions of cubes and possibly locations of data, but does not disclose measures.

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- Figures 1 and 5 of Yeh disclose that groupings of data can have a time dimension, but do not show data partitioned along a time dimension

Moreover, Applicants note that Pasumansky et al. issued prior to Yeh. As such, Applicants submit that if it were obvious to a skilled person to combine these two references together, Yeh would have included any Pasumansky et al. functionality in its disclosure.

In any event, Applicants note that claim 8 is dependent upon claims 1, 4 and 5 and claim 10 is dependent upon claims 1, 4, 5 and 9. The Pasumansky et al. reference fails to overcome the limitations of Yeh as applied to claims 5 and 9, as generally set out above.

Applicant trusts that the Examiner now agrees that claims 7 and 14-16 are patentable over Yeh as applied to claims 5 and 9, and further in view of the Pasumansky et al.

## CONCLUSION

It is submitted that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Prompt and favorable consideration of this Response is respectfully requested.

Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date: December 10, 2007

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